COD BY CLOSED REFLUX, COLORIMETRIC METHOD **SM ED 5220 D 1997 (2011)**

ADDITIONAL QC REQUIREMENTS FOR THIS METHOD: Certified or Accredited laboratories using this method are assessed to applicable requirements of SM 1020 and SM 5020.

Facility Name:_____VELAP ID_____

Assessor Name:_____Analyst Name:_____Inspection Date_____

Relevant Aspect of Standards	Method Reference	Y	N	N/A	Comments
Records Examined: SOP Number/ Revision/ Date _____ Analyst:_____ Sample ID: _____ Date of Sample Preparation:_____ Date of Analysis:_____					
1) Were Non-Potable Water samples collected in polyethylene, fluoropolymer, or glass containers; preserved to a pH < 2 with H2SO4; stored at ≤6°C; and held for not longer than 28 days?	40CFR136.3 Table 1I				
2) Was the digester operated at 150 +/- 2 degree C?	5220D.2.a 5220C.2.b				
3) Was digestion solution prepared as 10.216 g $K_2CR_2O_7$ and 167 mL H_2SO_4 and 33.3 g $HgSO_4$ in 1000mL distilled water?	5220D.3a				
4) Were the potassium hydrogen phthalate (KHP) standards made by first crushing and drying to a constant weight at 120°C then dissolving it in DI water at a rate of 425 mg KHP in 1000 mL water?	5220D.3.e 5220B.3.g				
5) Were tubes and caps washed with 20% H2SO4 prior to first use?	5220D.4a 5220C.4				
6) Were samples placed on preheated digester for 2 hours?	5220D.4a 5220C.4				
7) Were samples cooled, mixed, and then any suspended matter allowed to settle out of reaction vessels prior to measurement?	5220D.4b				
8) Were samples read at 600 nm and/or 420 nm?	5220D.2.b				
9) Were at least five standards made from potassium hydrogen phthalate (KHP) solution and subjected to the same digestion as samples used for calibration?	5220D.4c				
10) Were new calibrations prepared for each new lot of tubes/ampules or when verification standard differs by ≥ 5% from the calibration curve?	5220D.4c				
11) Was COD calculation = (mg O_2 X 1000) / mL sample	5220D.5				
Notes/Comments:					